Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1(Currently Amended).   A computing system comprising:

a processor having a data/control bus interface;

a data/control bus implementing one or more device communication channels;

5   a mass storage device having an interface for communicating mass storage transactions;

a data memory coupled to and shared by both the processor and the mass storage device;

~~a mass storage device having an interface for communicating mass~~

10   ~~storage transactions;~~ and

a controller having a memory interface coupled ~~directly~~ to the data memory and a mass storage interface coupled ~~directly~~ to the mass storage device's interface and operable to conduct mass storage transactions between the data memory and the mass storage device and to arbitrate access to memory

15   locations within the data memory between the data/control bus and the mass storage device.

2(Original).   The computing system of claim 1 wherein the data memory is coupled to the processor by a memory bus operating independent of the data/control bus.

3(Original).   The computing system of claim 2 wherein the controller comprises a memory access controller coupled to the processor, the data

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memory, and the mass storage device and operable to arbitrate accesses to the data memory between the mass storage and the processor.

4(Cancelled).

5(Original).   The computing system of claim 1 wherein the data memory is coupled to the data/control bus.

6(Cancelled).

7(Original).   The computing system of claim 1 further comprising storage controller processes and application behavior processes implemented using the processor.

8(Cancelled).

9(Cancelled).

10(Cancelled).   The computing system of claim 1 wherein the processor implements data structures storing physical geometry information about the mass storage device.

11(Cancelled).

12(Original). The computing system of claim 1 wherein the controller is integrated with the processor on a single integrated circuit chip.

13(Cancelled).

14(Cancelled).

15(Cancelled).

16(Cancelled).

17(Currently Amended).   The computing system of claim 1 wherein the mass storage device comprises:

a spinning disk having magnetic storage media provided on at least one surface;

5   a head for accessing data stored in the magnetic storage media;

an actuator mechanism for moving the head relative to the magnetic storage media in response to commands;

a servo controller coupled to ~~receive requests transferred from~~ the data memory ~~by the controller~~ and <u>configured to</u> generate the commands to the 10   actuator mechanism.

18(Original). The computing system of claim 17 wherein the mass storage device's interface is implemented by the servo controller and implements a physical interface to the data/control bus and a physical interface to the head and actuator mechanism.

5   19(Currently Amended).   The computing system of claim 1 wherein the computing ~~device~~ <u>system</u> comprises a set-top box including processes for implementing audio/video behaviors in the processor.

20(Currently Amended).   The computing system of claim 1 wherein the computing ~~device~~ <u>system</u> comprises a network appliance having a network controller coupled to the data/control bus.

21(Previously Presented). The computing system of claim 1 wherein the mass storage device comprises an optical storage device.

22(Previously Presented). The computing system of claim 1 wherein the mass storage device comprises a magneto-optical storage device.

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Claims 23-31(Cancelled).